

ACCESSION NR: AT4007055

Satisfactory adhesive properties were obtained. It was proved that the coatings protect titanium satisfactorily against oxidation and diffusion of the brazing elements. Studies of the stress rupture strength of the brazed coated AT-3 proved that the maximum rupture strength for AT-3 with a Ag coating is reached at lower temperatures (780-790 C) than for Re (790-800 C) and Rh (800-810) coatings. Orig. art. has: 4 figures & 2 tables.

ASSOCIATION: Institut metallurgii AN SSSR (Metallurgical Institute, AN SSSR)

SUBMITTED: 00

DATE ACQ: 27Dec63

ENCL: 00

SUB CODE: ML, MA

NO REF SOV: 005

OTHER: 000

Card

2/2

SHINYAYEV, A.Ya.; BONDAREV, V.V.

Investigating diffusion processes in the soldering of titanium
alloys. Trudy Inst. met. no.12:121-124 '63. (MIRA 16:6)

(Diffusion coatings)
(Titanium alloys--Welding)

SHINYAEV, A. Ya.

activation energy and the mechanism of self diffusion of nickel.
Trudy Inst. met. no.14(22-85-86) (MIR 17-8)

ACCESSION NR: A74009496

8/25/09/63/000/014/0086/0089

AUTHOR: Bondarev, V. V.; Shinyayev, A. Ya.

TITLE: Investigation of diffusion processes in soldering titanium with a rhenium coating

SOURCE: AN SSSR. Institut metallurgii. Trudy*, no. 14, 1963. Metallurgiya, metallovedeniye, fiziko-khimicheskiye metody* issledovaniya, 86-89

TOPIC TAGS: titanium, titanium soldering, soldering, rhenium coating, electro-plating, titanium pickling, vacuum soldering

ABSTRACT: Because considerable difficulty is encountered in soldering titanium with other metals, the possibility of using rhenium to protect titanium alloys during high temperature soldering was investigated. Because rhenium is very strong and resistant to corrosion, it was expected that the soldered joints would have high mechanical strength. It was difficult to get a galvanic covering on titanium with strong adherence because of the formation of an oxide foam on the surface. The most effective way to eliminate this foam was pickling in hot sulfuric acid, thereby forming a surface hydroxide layer to protect the metal from further oxidation. An electromechanical process was used for the Re coating on 5 Ti-alloy

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ACCESSION NR: AT4009496

specimens which were then put in packages with copper plates and subjected to soldering in a vacuum. Microstructural examinations established that various diffusion zones were formed between the titanium and its covering. Results of mechanical tests and of metallographic examinations show that the strongest soldered connections were obtained by soldering at 780-820 C for 15-20 minutes. The strength attained was 19 kg/mm² with a rhodium covering 6-12 μ thick. At high temperatures, the formation of chemical compounds of the type Re₂Ti₅ takes place which causes brittleness of connections in the diffusion zone and marked weakening. Orig. art. has: 1 table and 1 figure.

ASSOCIATION: Institut metallurgii AN SSSR (Metallurgical Institute)

SUBMITTED: 00

DATE ACQ: 25Jan64

ENCL: 00

SUB CODE: ML

NO REF Sov: 010

OTHER: 001

Card 2/2

15635

247500

S/126/63/015/001/013/029
E111/E383AUTHOR: Shinyayev, A.Ya.

TITLE: Self-diffusion of ni kel

PERIODICAL: Fizika metallov . metallovedeniye, v. 15, no. 1,
1965, 100 - 104

TEXT: Reliable information on the mechanism and parameters of the self-diffusion of nickel is needed for interpreting numerous experimental data on the physical and mechanical properties of nickel and its alloys. The present investigation was undertaken to make good the deficiencies in this information. In the experiments a film (less than 1 μ thick) of the radioactive isotope Ni^{63} was electrolytically deposited on 2-5 mm thick specimens of 99.98% pure nickel, previously heat-treated and polished. Diffusion annealing was effected in quartz ampoules at $929-1303^{\circ}C$ for 1-900 hours. The activity of successively removed (by electrolytic or chemical etching) thin layers of known thickness was determined and thence the diffusion coefficient D . Conclusions: the $\log D = f(1/T)$ relationship is linear in the range $1085-1303^{\circ}C$ only. Below $1085^{\circ}C$ the values of the coefficient of volume

Card 1/2

Self-diffusion of nickel

S/126/65/015/001/013/029
E111/E583

diffusion are higher on account of intercrystallite diffusion. The activation energy E for the self-diffusion of nickel at 1065-1303 $^{\circ}\text{C}$ was calculated to be 69.5 ± 0.5 kcal/mole, the pre-exponential factor being $2.59 \pm 0.45 \text{ cm}^2/\text{sec}$. The product of the diffusion coefficient for intercrystallite diffusion and the width of the intercrystallite zone increased from 3.6×10^{-16} cm^5/sec between 929 and 1085 $^{\circ}\text{C}$. The activation energy for intercrystallite diffusion over this range was 30.4 ± 2 kcal/mole. The results obtained can be interpreted in terms of the vacancy mechanism of diffusion. There are 4 figures, and 2 tables.

f

ASSOCIATION: Institut metallurgii im. A.A. Baykova AN SSSR
(Institute of Metallurgy im. A.A. Baykov of the
AS USSR)

SUBMITTED: June 6, 1961

Card 2/2

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549520002-3

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549520002-3"

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549520002-3

$$c_{T1}(x) = 200 \frac{19,11 - \sqrt{104,2 - \frac{1}{b} \ln \frac{I(x)}{I_{T1}}}}{2^x \sqrt{1 + \frac{1}{b} \ln \frac{I(x)}{I_{T1}}}} \quad (1)$$

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549520002-3"

L 14516-65

ACCESSION NR: AFG4048058

NO REF Sov: 001

OTHER: 004

Card 3/3

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549520002-3

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549520002-3"

other titanium alloys. The samples were first etched in 40% sulfuric acid at 80°C for 10-40 minutes. The kinetics of the process of mutual diffusion were then studied by calculating the rate of mutual diffusion as a function of the working time. The diffusion zones formed between the titanium and metals dis-

tributed by various methods. The samples were placed in a holder which slides along slots made in a holder, and the samples are held in a TM-20 meter located above the upper screens of the holder. By means of curves of the TM-20 meter readings, and knowing the attenuation coefficient in pure components and in a two-component medium, it is possible to find the distribution of different elements in the diffusion zone. The results of this investigation will be published in the near future.

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CIA-RDP86-00513R001549520002-3"

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549520002-3

L 40797-65
ACCESSION NR: AP4047873

Card 2/2

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549520002-3"

ACCESSION NR: AP4044899

S/0032/64/030/009/1106/1109

AUTHORS: Shinyayev, A. Ya; Bondarev, V. V.; Charnenko, M. S.TITLE: Study of the mutual diffusion of metals by weakening of radioactive radiationSOURCE: Zavodskaya laboratoriya, v. 30, no. 9, 1964, 1106-1109TOPIC TAGS: diffusion annealing, radioactivity measurement/ TM 20 radiation counter

ABSTRACT: The authors propose a method for studying the chemical composition of zones of mutual diffusion. This method is based on the weakening of intensity of a narrow beam of gamma rays from a steady source. The principle requires a very narrow but intense beam of radiation, a means of positioning the specimen with great accuracy (within a few microns), and a maximal suppression of background in the counter (from scattering of electrons and gamma rays). A special apparatus was designed to meet these requirements. The radiation source was Tc^{127} . For detection, a TM-20 counter was employed. A supplementary lead shield, 10 mm thick, was used to cut down on background noise. Diffusion pairs of Ti-Ho and Ti-Ni were studied, and the results are shown graphically in Fig. 1 on the

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ACCESSION NR: AP4044899

Enclosure. These results show that the weakening of a narrow beam of gamma rays may be used to analyze composition in the diffusion zone between metals when these metals are perfectly or partially soluble in each other. Quantitative determination requires diffusion annealing at a given temperature. The time of annealing must be chosen so as to give a diffusion zone 100 microns or more wide. Data on distribution of diffusing elements may be used to compute all diffusion characteristics of the mutual process. A major advantage of the method is the possibility of studying all elements in the periodic system, including the light elements. Orig. art. has: 3 figures and 3 formulas.

ASSOCIATION: Institut metallurgii im. A. A. Baykova (Institute of Metallurgy)

SUBMITTED: 00

ENCL: 01

SUB CODE: MH, NP

NO REF Sov: 004

OTHER: 003

Card 2/3

ACCESSION NR: APL4044899

ENCLOSURE: 01

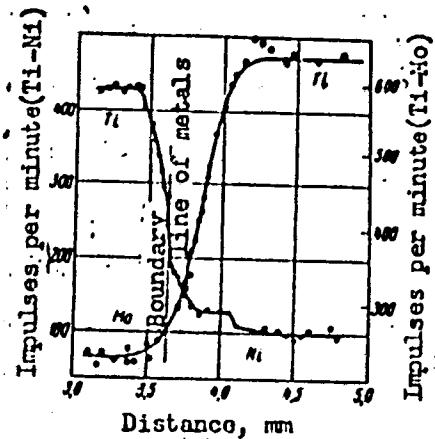


Fig. 1. Weakening in intensity of gamma rays on passing through different segments of the diffusion zone of Ti-Mo (annealed at 850°C, 380 hours) and Ti-Ni (annealed at 743°C, 2 hours).

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ABSTRACT: Mutual diffusion of titanium with copper, nickel, rhodium and cobalt-⁷⁷ nickel alloy (70 wt. % Co) was studied. This selection was based on the importance of these metals for protection of titanium in many technological processes. The

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APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549520002-3"

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549520002-3

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549520002-3"

I 15182-66 EMT(m)/T/EWP(t)/EWP(b) IJP(c) JD/JW/JG

ACC NR: AP6002668

SOURCE CODE: UR/0126/65/020/006/0875/0880

AUTHOR: Shinyayev, A. Ya.

33
70
B

ORG: A. A. Baykov Institute of Metallurgy (Institut metallurgii im. A. A. Baykova)

TITLE: Diffusion processes in chromium-iron alloys

SOURCE: Fizika metallov i metallovedeniye, v. 20, no. 6, 1965, 875-880

TOPIC TAGS: metal diffusion, chromium alloy, iron alloy, activation energy, solid solution

ABSTRACT: Analysis of the findings on the activation energy of the diffusion of chromium $E_{\text{diff}}^{\text{Cr}}$ and iron $E_{\text{diff}}^{\text{Fe}}$ in alloys of the Fe-Cr system (Paxton, H. W., Runitake, T. Trans. AIME, 1960, 218, 6, 1003) shows that $E_{\text{diff}}^{\text{Fe}}$ for the alloys with 20-50% Cr increases almost linearly from 50 to 80 kcal/mole for diffusion of Fe and from 48 to 70 kcal/mole for diffusion of Cr. In the range of alloys with 60% Cr the curve undergoes an inflection with subsequent sharp drop in $E_{\text{diff}}^{\text{Cr}}$ from 75 to 52 kcal/mole on transition from alloy with 70% Cr to pure Cr. The data on the diffusion of Fe in these alloys must be more precisely defined, and as for the diffusion of Fe in pure Cr, it has not yet been investigated at all. Accordingly, the authors investigated the diffusion of Fe in pure Cr and in Cr-Fe alloys containing 90, 80, 70, 60, 55, 50,

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UDC: 548.526

L 15182-66

ACC NR: AP6002668

3

48.8, 45, and 20% Cr by weight, following prestabilization (1240°C for 8 hr; 1100°C for 20 hr and 850°C for 5 hr with cooling in air). The diffusion coefficient D was determined by the film-stripping method based on electrolytic polishing and by measuring the activity of the radioactive isotope tracer Fe⁵⁹. Findings: in the alloys with 20% Cr D was virtually independent of the content of gaseous impurities. By contrast, in Cr-rich alloys (e.g. alloys with 90% Cr) D was 1.5-2 times higher owing to the influence of oxygen and nitrogen and hence the E_{diff} was much higher as well. It was established that D reaches its maximum for alloys with 60 at.% Cr. and for the alloys prestabilized at 850°C it is higher than for those prestabilized at 1150°C: this may be related to phase transformations which always accelerate the diffusion process. The variation in D for the diffusion of both components in the α -solid solution of Cr-Fe alloys (100-20% Cr) may be explained if the solid solution is considered an ideal solution. An exception to this rule is encountered in the 60-70% Cr range. The variation in E_{diff}^{Fe} for all the investigated alloys is illustrated in Fig.1 which shows that the maximum of E_{diff}^{Fe} virtually coincides with the maximum of E_{diff}^{Cr}. For Cr-rich alloys and pure Cr E_{diff}^{Fe} is definitely lower than E_{diff}^{Cr}. For Fe-rich alloys, conversely, E_{diff}^{Fe} is higher. The formation of an explicit maximum of E_{diff} for alloys with 60-70% Cr points to a marked increase in bonding forces within this range. This is in agreement with the calculation of the integral free energy ΔG based on the data on the activity of the Fe-Cr system. As Fig. 1 shows, the minimum of ΔG pertains to the alloy with 60% Cr. Such a signal increase in bonding forces is

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L 15182-66

ACC NR: AP6002668

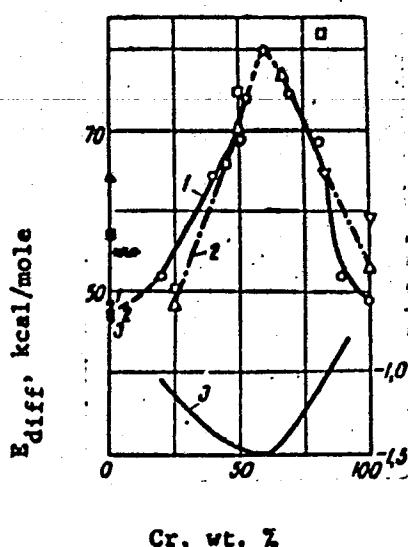


Fig. 1. Activation energy of the process of diffusion of iron (1) and chromium (2) as well as the integral free energy ΔG (3) in Cr-Fe alloys:

O - diffusion of Fe^{59} according to the author;
 □ - diffusion of Fe^{59} according to L. I. Ivanov and N. P. Ivanchev (Izv. AN SSSR, OTN, 1958, no. 8, 17); ▽ - diffusion of Cr^{51} according to L. I. Ivanov and N. P. Ivanchev; Δ - the same, according to H. W. Paxton and T. Runitake (Trans. AIME, 1960, 218, 6, 1003); X - data on mutual diffusion (Heumann, T., Böhmer, H. Arch. Eisenhüttenw., 1960, 31, 12, 749)

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L 15182-66

ACC NR: AP6002668

bound to markedly affect other properties of the alloys as well. And indeed, it was established that the alloys with 60-70% Cr display the highest hardness of all the Fe-Cr alloys investigated. Electronmicroscopic examination of specimens revealed the alloy with 70% Cr contained foci of a second phase (30,000-35,000 Å in magnitude) which are absent in the other alloys investigated. Further investigation of the subject is necessary. Orig. art. has: 5 figures, 2 tables.

SUB CODE: 07, 11, 20/ SUBM DATE: 11Jan65/ ORIG REF: 006/ OTH REF: 007

Card 4/4 vmb

ACC NR: AT6012368

SOURCE CODE: UR/0000/65/000/000/0043/0047

AUTHORS: Shinyayev, A. Ya.; Sokiryanskiy, L. F.; Ditsman, S. A.; Kupriyanova, T. A.

ORG: none

TITLE: Mutual diffusion of components and the phase diagram of the system Ti--W

SOURCE: Soveshchaniye po metallokhimii, metallovedeniyu i primeneniyu titana i yego splavov, 6th. Novyye issledovaniya titanovykh splavov (New research on titanium alloys); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1965, 43-47

TOPIC TAGS: titanium, tungsten, alloy phase diagram, metal diffusion

ABSTRACT: The mutual diffusion of titanium and tungsten was studied over the temperature interval of 1000--1600°C. The experimental procedure was described in an earlier publication by A. Ya. Shinyayev, V. V. Bondarev, and Ye. V. Sergeyeva (Sb. Metallovedeniye titana, Trudy 5-go soveshchaniya po titanu. Izd-vo Nauka, 1964, str. 289). The experimental results are presented graphically (see Fig. 1). It is concluded that the system Ti--W exhibits a two-phase region up to the melting point temperature of the alloys. From a perusal of literature data on the diffusion and solubility of other metals in titanium, it is concluded that tungsten belongs to that class of elements which exhibits only partial solubility in titanium.

Card 1/2

L 39785-96

ACC NR: AT6012368

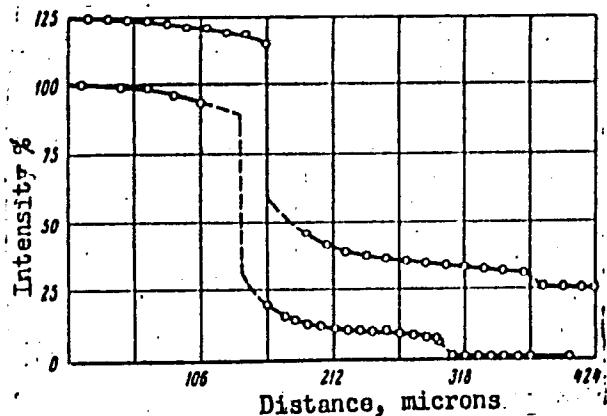


Fig. 1. Intensity of tungsten radiation (line L_d) in the diffusion zone Ti-W. (Annealed at 1200°C for 6 hours; for convenience, curves derived from different regions of polished section are displaced with respect to each other)

Orig. art. has: 1 table and 5 figures.

SUB CODE: 11/

SUBM DATE: 02Dec65/

ORIG REF: 003/ OTH REF: 005

Card 2/2111LP

L 38560-66

ACC NR: AT6012408

in Fig. 1, reaching a maximum at \approx 780--800°C. The soldering atmosphere affected the adhesion strength (due to the porosity of the layers), with argon, helium, or

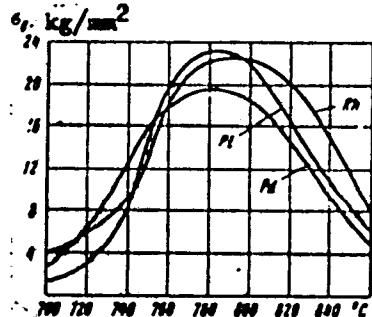


Fig. 1. Adhesion strength of electroplated precious metal layers on titanium as a function of soldering temperature (20 min duration).

vacuum most effective. Two sample photographs of the microstructure of the titanium alloy-precious metal interface are presented. Orig. art. has: 3 figures.

SUB CODE: 11, 13/ SURM DATE: 02Dec65/ ORIG REF: 008/ OTW REF: 001

Card 2/2 11/11/12

L 36112-66 EWT(m)/T/EWP(t)/MPI IJP(e) JD/HW
ACC NR: AP6017305 (A) SOURCE CODE: UR/0126/66/021/005/0721/0726

AUTHOR: Shinyayev, A. Ya.

41

ORG: Institute of Metallurgy im. A. A. Baykov (Institut metallurgii)

B

TITLE: Diffusion of nickel in the solid solution and two-phase alloys of the system
nickel--titanium

SOURCE: Fizika metallov i metallovedeniya, v. 21, no. 5, 1966, 721-726

TOPIC TAGS: nickel containing alloy, titanium containing alloy, metal diffusion

ABSTRACT: The diffusion of nickel in the nickel--titanium alloys having a composition of 2 to 21.38 wt % Ti was studied. The diffusion coefficients were determined at 929, 991, 1058, 1114, 1196, and 1220°C. The energy of activation for diffusion was determined, and the results were compared with similar results obtained for iron diffusion in Ni--Ti alloys (A. Y. Shinyayev, FMM, 1959, 7, 875). The diffusion coefficients were determined by employing radioisotope techniques using Ni⁶³. The experimental procedure followed is described by A. Ya. Shinyayev (FMM, 1963, 15, 100). The experimental results are presented in graphs and tables (see Fig. 1). Little change was found in the nature of nickel diffusion in the different solid solutions. However, the character of the diffusion changed markedly in the regions of the solubility boundaries. It is suggested that the change in the nature of diffusion is caused by the different composition of the alloy. If the titanium concentration is further

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INFO: 548.526

L 36112-66

ACC NR: AP6017305

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increased, i.e., beyond the solubility limit, the diffusion is controlled by the concentration of Ni₃Ti in the alloy. An appendix is attached in which a calculation of the mean square error in the measured energy of activation for diffusion is

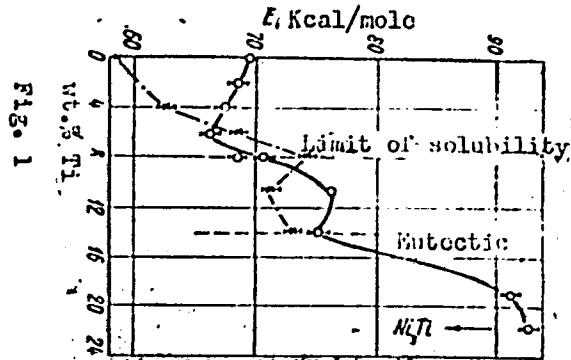


Fig. 1. Energy of activation for diffusion of nickel in nickel-titanium alloys as a function of alloy composition. The dash-dotted line shows the energy of activation for the diffusion process of iron in the same alloys (reference 1).

presented. Orig. art. has: 2 tables, 2 graphs, and 6 equations.

SUB CODE: 11,20 / SUBM DATE: 26Feb64 / ORIG REF: 007 / OTH REF: 001

LS
Card 2/2

L 53035-67 EWP(k)/EWP(m)/P/EWP(v)/EWP(t)/EWP(e) 33
ACC NR: AP6023437 SOURCE CODE: UR/0135/66/000/007/0014/0016

AUTHOR: Shinyayev, A. Ya. (Candidate of physico-mathematical sciences); Bondarev, V. V. (Candidate of technical sciences)

ORG: IMYeT im A. A. Baykov (IMYeT)

33
B

TITLE: Diffusion brazing of titanium with the aid of intermediate galvanic coatings

SOURCE: Svarochnoye proizvodstvo, no. 7, 1966, 14-16

TOPIC TAGS: metal diffusion plating, titanium alloy/ VT1 titanium alloy, AT3 titanium alloy, OT4 titanium alloy

ABSTRACT: The conditions for producing high strength titanium joints by means of diffusion brazing and intermediate galvanic coatings with a low melting eutectic serving as a solder are studied. Tests were made on VT1, AT3 and OT4 titanium alloy specimens. Copper and layers of Cu-Ni-Cu and Cu-(CO-Ni)-Cu were used as galvanic coatings. Titanium specimens were degreased by organic and standard chemical solutions. Scale and oxide layers were cleaned by sandblasting, then pickled in a mixture of fluoric and nitric acids. The titanium hydrate layer was found by dipping the specimens in a 40% sulphuric acid solution at $80 \pm 2^\circ\text{C}$ for 30 min. Galvanic coatings 20-25 μ thick were deposited from standard electrolytes and cyanide electrolytes on the surfaces to be brazed. Brazing conditions: vacuum-- 10^{-2} - 10^{-3} mm/Hg (0°C), unit pressure--3-5 kg/cm 2 , brazing temperature--860-1000 $^\circ\text{C}$. Exposure varied from 1 min to 1 hour and the speci-

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UDC: 621.791.3:539.376.3.621.357.7.669.295

L-03035-67

ACC NR: AP6023437

mens were tested for tensile strength; joints were always sheared by the eutectic. With higher temperature, the eutectic components diffused into the base metal, decreasing the thickness of the eutectic and increasing the strength of the joint. The optimal temperature range was found to be 940-960°C. Higher temperatures (1000°C) caused considerable growth in grain size in the base metal, decreasing the strength of the joint. Electron microscope has shown that the eutectic had many overlapped microcracks of 0.2-0.4 μ in diameter. In order to reduce this destructive effect, the eutectic thickness must be brought to an optimal value of 6-9 μ . However, the eutectic could be replaced by a "diffusion zone" of thickness 30-40 μ if the brazing process was carried out at temperature >930°C. The maximum strength was: 1) 26-28 kg/mm² for the copper galvanic coating when exposed for (15-30 min) at temperatures of 960-970°C; 2) 38-40 kg/mm² for (Cu-Ni-Cu) coating when exposed for 15-30 min at 960-970°C; 3) 67-75 kg/mm² for [Cu-(Co-Ni)-Cu] coating when exposed for 15 min at temperatures of 960-970°C.

Orig. art. has: 2 figures, 1 table.

SUB CODE: 13/ SUBM DATE: none/ ORIG REF: 006

rs
Card 2/2

ACCESSION NR: AT4033375

S/2960/63/000/002/0151/0154

AUTHOR: Morachevskiy, V. G.; Shinyayev, B. M.

TITLE: Experimental investigation of the value of the evaporation coefficient for aqueous solutions of surface-active materials

SOURCE: Leningrad. Universitet. Problemy fiziki atmosfery*, no. 2, 1963, 151-154

TOPIC TAGS: meteorology, surface-active material, atmospheric physics, evaporation coefficient, cloud physics, cloud dispersal, fog dispersal, cloud evaporation rate, chemical cloud dispersal

ABSTRACT: Investigation of the kinetics of evaporation and condensation of aqueous solutions of surface-active materials are of interest because of their possible use as reagents for the dispersal of clouds and fogs. The authors have used the T. Alty method for determination of the evaporation rate of pure water (Phil. mag. vol. 15, No. 82, 1933; Proc. Roy. Soc., vol. 149, No. 104, 1935) in an experimental investigation of the evaporation coefficients of several types of aqueous solutions of surface-active materials. Description of the apparatus used, which involved a force pump, manometer, and thermostat, is limited to two sentences and a photograph. The first step in the experiment was to determine the coefficient of evaporation of water. Five experiments were made, giving a mean value of the coefficient $\alpha = 0.0368$, which agrees well with Alty's value ($\alpha = 0.037$). This was

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ACCESSION NR: AT4033375

followed by measurement of the evaporation coefficient of two bromides of an ammonium amide base with the radicals $R = C_2H_5$, $R = C_3H_7$, in the form of solutions with concentrations of 0.1, 0.25, 0.5, and 1% by weight. Five or six measurements of the evaporation coefficient were made for each concentration of the solution. The results revealed that with an increase in the concentration the evaporation coefficient attains a minimum value at a concentration of 0.25-0.5% and thereafter does not change. This can mean that a further increase in concentration does not influence surface properties. The derived decrease in the evaporation coefficient does not correspond numerically to the decrease in the evaporation rate of these solutions. Orig. art. has: 2 figures, 2 formulas, and 2 tables.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: 00	ATD PRESS: 3072	ENCL: 00
SUB CODE: ES	NO REF Sov: 004	OTHER: 004

Card 2/2

BULEVAYEV, V. I., elektronik

Stand for checking the power supply units of track circuit with a frequency of 75 c.p.s. Avtom. telem. i sviaz' 8 no.1:34, Ja '64.
(MZh. 17:3)
1. Illovayskaya distantsiya signalizatsii i svyazi ionotakoy vremi.

YEVSSEYENKOV, N. I.; SHINYAYEVA, N. A., glavnnyy metodist pavil'ona; OZEROV, V. N.,
redaktor; VESKOVA, Ye. I., tekhnicheskiy redaktor

[The "Bee Culture" pavilion; a guidebook] Pavil'on "Pchelovodstvo";
putevoditel'. Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. 22 p.
(MIRA 9:12)

1. Moscow. Vsesoyuznaya sel'skokhozyaystvennaya vystavka, 1954.
2 Direktor pavil'ona (for Yevseyenkov)
(Moscow--Bee culture--Exhibitions)

SHINYAYEVA, V. A., Cand of Bio Sci -- (diss) "Influence of the conditions of cultivation on external characteristics of worker bees and on the supplying of nutrients to the larva." Kazan', 1957, 19 pp (Kazan' Veterinary Institute im N. E. Bauman), 130 copies (KL, 29-57, 90)

RABOVSKIY, B.G.; SHINYAYEVA, V.S.

Relationship between molecular and convective diffusion accompanying
mass transport in the gas phase. Zhur. prikl. khim. 34 no.2:287-
291.F '61. (MIRA 14:2)

(Diffusion)

(Mass transfer)

DANOV, S.M.; SHINYAYEVA, V.S.

Liquid - vapor equilibrium and vapor pressure in the system
aniline - caprolactam, Zhur. fiz. khim. 39 no.2:486-488 F
'65. (MIRA 1814)

L 38560-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/I/EWP(t)/EWP(k)/ETI/EWP(h)/EWP(1) 1JW167

ACC NR: AT6012408 JD/JG/GD	SOURCE CODE: UR/0000/65/000/000/0309/0311
AUTHORS: Bondarev, V. V.; Shinyayev, A. Ya.	SC 49 L+1
ORG: none	
TITLE: <u>Diffusion layers and strength of soldered joints of titanium using electroplating of precious metals</u>	
SOURCE: Soveshchaniye po metallokhimi, metallevedeniyu i primeneniyu titana i yego splavov, 6th. Novyye issledovaniya titanovykh splavov (New research on titanium alloys); trudy sovashchaniya. Moscow, Izd-vo Nauka, 1965, 309-311	
TOPIC TAGS: diffusion soldering, metal soldering, metallurgic testing machine, titanium alloy, electroplating / R-5 metallurgic testing machine	
ABSTRACT: The authors' previous work on the strength of diffusion soldered joints (Svarochnoye proizvodstvo, 1963, No. 10, 14) is supplemented by this investigation of the adhesion strength of <u>electroplated platinum, palladium, and rhodium layers</u> on a <u>titanium alloy base</u> under different conditions of heat treatment. Adhesion strength was measured by soldering soft and hard solder to the electroplated layers and applying a tensile load on an <u>R-5 testing machine</u> . It was found that by using cold solder (72--128°C melting temperature) adhesion strengths of 0.3--1.2, 0.2--0.3 and 0.8--1.8 kg/mm ² were obtained respectively for Pt, Pd, and Rh. Adhesion strength increased considerably with increasing soldering temperature (hard solder) as shown	

Card 1/2

L 38359-66 EWT(m)/SHP(V)/1/5/1977 11:00 AM 1977
ACC NR: AT6012407 SOURCE CODE: UR/0000/65/000/000/0305/0308

AUTHORS: Shinyayev, A. Ya.; Bondarev, V. V.

ORG: none

TITLE: Diffusion soldering of titanium

SOURCE: Soveshchaniye po metallokhimii, metallovedeniyu i primeneniyu titana i yego splavov, 6th. Novyye issledovaniya titanovykh splavov (New research on titanium alloys); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1965, 305-308

TOPIC TAGS: ^{COPPER}, titanium alloy, metal soldering, diffusion soldering, metal joining / AT3 titanium alloy, OT4 titanium alloy

ABSTRACT: Diffusion soldering of AT3 and OT4 titanium alloys through an intermediate layer of copper and through a triple layer of copper--(alloy--cobalt nickel)--copper was investigated. The soldering was performed in a vacuum ($5 \cdot 10^{-2}$ - 10^{-3} mm), at a specimen pressure of 3-5 kg/mm², at temperatures of 800--1000C for up to one hour, through 6--25 micron thick intermediate layers. The strength and diffusion depth of the soldered joints were measured for various temperature conditions and duration of contact. It was found that below 885C the metals could not be soldered through a 20--25 micron thick copper layer. Above this temperature the strength of the soldered joint increased to 25 kg/mm² at 940C (for 30 minutes) and then decreased for higher soldering temperatures. Soldering with the triple intermediate layer

Card 1/2

L 38559-26
ACC NR: AT6012407

gave best results (55--75 kg/mm²) at a soldering temperature of 950--970C (for 60--15 minutes respectively). Microstructural observations (sample photographs are presented) show that the strongest joints correspond to the formation of single-phase diffusion layers of 60--100 micron thickness. Orig. art. has: 2 figures.

SUB CODE: 11, 13/ SUBM DATE: 02Dec65/ ORIG REF: 002/ OTH REF: 002

Card 2/2116P

KOPCHENOV, V. (g.Zyryanovsk, Vostochno-Kazakhstanskoy oblasti);
POTAPOVA, Z.; SHINZHIRBAYEVA, Urzhan

Good news from women's councils. Rabotnitsa 40 no.3:25 Mr '62.
(MIRA 16:2)

1. Chlen ulichnogo komiteta goroda Ivanovo (for Potapova).
2. Zaveduyushchaya rayonnym otdelom kul'tury sela Saryagach,
Yuzhno-Kazakhstanskoy oblasti (for Shinhirbayeva).
(Women-Societies, etc.)

51150

30533

S/564/61/003/000/001/029
D231/D304

AUTHORS: Ship, V., and Vanichek, V. (Czechoslovak Socialist Republic)

TITLE: New elements of equipment for growing monocrystals from solutions

SOURCE: Akademiya nauk SSSR. Institut kristallografii. Rost kristallov, v. 3, 1961, 265-272

TEXT: This is a summary of work carried out at the Minerals Research Institute at Turnov. The authors studied in detail the factors affecting crystal growth: the heat of the system, the composition of the solution, supersaturation, movement of the solution, the nature of the "primer" and the apparatus itself. The effect of impurities on the growing crystal was eliminated by using spectro-graphically standardized salts. Of the factors listed, movement of the solution relative to the growing crystal (and vice versa) and programmed temperature lowering of the solution receive special notice. Speed of rotation, time of rotation in one

Card 1/3

30501

S/564/61/003/000/001/029
D231/D304

New elements of...

direction or the other, reversing at regular intervals, have an important bearing on satisfactory crystal cultivation. Speeds of rotation ranged from 10 to 30 rpm and the periodicity from 0.5 to 1.5 min. In order to attain the desired conditions, an electronic switching apparatus was devised for use with a motor driven by a.c., a circuit diagram being included in the article. Mokiyevskiy described a planetary movement for growing symmetrical crystals. The authors describe two arrangements for moving the crystal and the solution: the first by periodically reversing the rotation of the crystal and the second by using a gear which imparts a spiral motion to the crystal. The shape of the crystal-holder, the height and speed of ascent could all be varied to change the crystal growing conditions. Symmetrical laving of all the faces of the growing crystal was realized, and perfect crystals were a practical possibility. In order to grow high quality crystals there must be little or no temperature fluctuation, but the temperature drop must be very carefully controlled for programmed changes. Contact thermometers, mark "Vertex," were found to be quite satisfactory. Multiple units with as many as 20 crystallizers were set up, regulated by a single control gear. The

Card 2/3

30533

S/564/61/003/000/001/029

D231/D304

New elements of...

heating element consisted of six iron wires in parallel set in the base of the thermostat. The current input was 7 kw at a potential of 24 volts, the control gear for the thermostat being adapted to regulate the temperature which in turn was registered by a group of four contact thermometers motivated by a pulsator with step-counter mechanism. If one contact thermometer should fail, the others come into operation, so that in the end the temperature drop could be closely controlled within the range 0.1 - 3° per 24 hours, 9100 impulses being applied. Some difficulty was experienced when the authors went over to independent temperature control of the different crystallizers, and it was at this stage that the multiple crystallizer was designed. Semi-automation could thus be introduced and personnel released for other service. The work should be of particular significance in industrial single crystal growing; crystals, it is stated, grown by means of automatic operation are of the highest quality. Engineers Shmid, Gnizdil, Kvapil, Vartal and the personnel of the Mechanical Department played an active part in the work. There are 8 figures and 7 Soviet-blue references.

Card 3/3

4

34,7000

39528

S/081/62/000/011/022/057
E194/E184

AUTHORS: Ship, V., and Vanichek, V. .

TITLE: New pieces of equipment for growing single crystals
from solutions

PERIODICAL: Referativnyy zhurnal, Khimiya, no.11, 1962, 166,
abstract 11 E9. (In the Symposium: "Rost kristallov"
("Growth of Crystals"), v.3, Moscow, AN SSSR, 1961,
265-272. Discussion, 501-502).

TEXT: The article considers the influence of motion of the
solution on the conditions of growth of crystals. It is noted that
the crystal must have a reversing rotary motion in the solution.
It is recommended to use a rate of rotation in the range 10 to 30
r.p.m. and to alter the direction of rotation every 0.5 - 1.5 min.
A diagram is given of an electronic motor changeover switch with
intermediate standstill. This switch uses a multi-vibrator with
two miniature thyratrons type 21 T031 and an electronic time
switch type 36Л 21 (EBL21). Two mechanical arrangements are given
for applying reversing motion to the crystals during the process
of growth by means of a piston and spiral motion by means of a
Card 1/2

New pieces of equipment for growing... S/081/62/000/011/022/057
E194/E184

piston with simultaneous rotation. It is shown that Vertex contact thermometers may be used for programmed temperature change of the solution during crystallization. A circuit is given of a programmed thermo-controller to control crystallisation devices which contain up to 20 crystallisers. The control and measuring device of the instrument is a group of four contact thermometers, contact from which moves an impulse pick-up with step-by-step mechanism. A temperature reduction of 0.1° is effected by 910 impulses. General illustrations are given of six- and two-position laboratory sets for growing crystals.

[Abstractor's note: Complete translation.]

Card 2/2

SHIPACHEV, V. G.

5898. SHIPACHEV, V. G. - Geograficheskoye razpolozheniye zolotykh i srebrenykh ochejok vostochnoy sibiri i bor'ba s zolotom. irkutsk, 1954.33s.; il. kart. 19sm. (irkut. gos. med. in-t). 500 ekz. B. Ts. - (54-56529) 616.44-006.5 (57.2)

SO: Knizhnyaya Letopis', Vol. 1, 1955

SHIPACHEV, V.G. [deceased], prof. zasluzhennyy deyatel' nauki

Metacarpal bone graft in reconstruction of the fingers and hand.
Ortop.travm. i protez. 19 no.5:52-56 S-0 '58 (MIRA 11:12)

1. Iz kafedry fakul'tetskoy khirurgii (zav. - prof. B.D. Dobychin)
Irkutskogo meditsinskogo instituta (dir. prof. A.I. Nikitin).

(HAND, wds. & inj.

reconstruction using metacarpal bone grafts (Rus)
(METACARPUS, transpl.
in plastic surg. in hand. inj. (Rus))

SHIPACHEV, V.P.

Determining the inflow of water in the coal mines of the Lenin deposit
in the Kuznetsk Basin. Izv. vys. ucheb. zav.; geol. i razv. 3 no.5:
109-116 My '60. (MIRA 13:11)

1. Tomskiy politekhnicheskiy institut.
(Kuznetsk Basin--Coal mines and mining)

SHIPACHEV, V.P.

Underground waters of Tomsk Province. Mat. Kom. po izuch. podzem.
vod. Sib. i Dal' Vost. no.2:60-67 '62; (MIRA 17:8)

SHIPACHEV, V.P.

Paleohydrogeological pattern of underground waters in Tomsk
Province. Sov. geol. 6 no.11:131-135 N '63. (MIRA 17:1)

1. Tomskaya kompleksnaya ekspeditsiya.

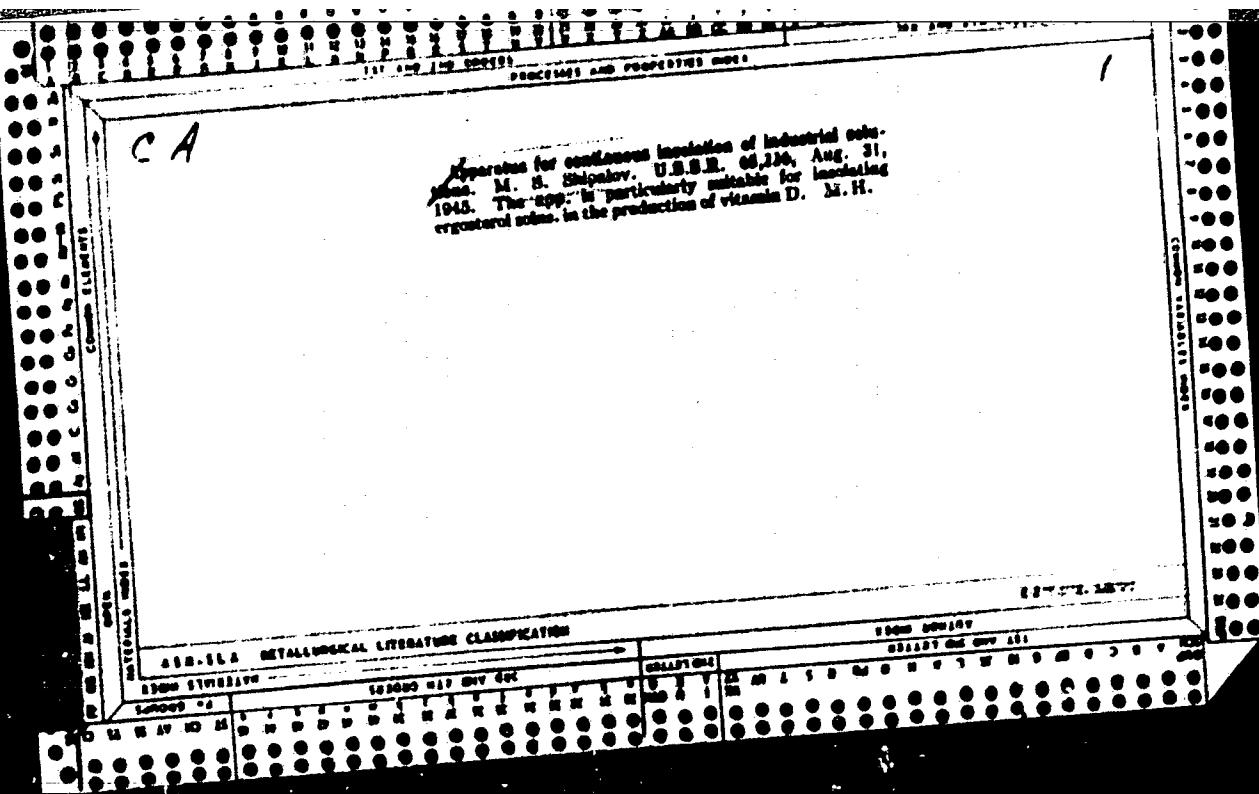
The ultraviolet absorption spectrum of myosin. M. N. Lyubimova and M. S. Shipagin. *Biokhimiya* 5, 144-51 (1940); cf. C. A. 34, 5810. Since adenosinetriphosphatase activity in the myosin protein fraction had previously been detected, it was of interest to det. to what category of enzymes (usual protein or complex protein contg. a prosthetic group) the adenosinetriphosphatase of muscles must be assigned. Myosin exhibits an absorption max. in the ultraviolet at 280 m μ . An absorption indicates that no prosthetic group is present. A absorption max. of 270 m μ is obtained from a mixed soln. of myosin (absorption max. at 290 m μ) and adenosinetriphosphoric acid (absorption max. at 260 m μ). No union between the 2 components apparently takes place, as in the case of riboflavin and protein. Inactivation of the adenosinetriphosphatase activity of myosin (by heating to 37° or acidification to pH 4) does not lead to a change in the ultraviolet absorption spectrum.

Inst Biochem and Lab. of Radiant Energy of the
Academy of Sciences USSR, Moscow

ASSISTANT METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549520002-3"



SHIBAIKOV, N. I., Eng.

Cand. Tech. Sci.

Dissertation: "Apparatus for Proximate Analyses and Control of Vitamins." Doctoral Technological Inst of the Food Industry, 22 Apr 47.

SC: Vechernaya Moskva, Apr, 1947 (Project #17236)

SHIPALOV, M.S., kandidat tekhnicheskikh nauk.

Separation and refining of compound organic mixtures by means of molecular distillation (results of the conference on problems of molecular distillation. Vest. AN SSSR 23 no.9:72-75 S '53. (MLRA 6:10) (Distillation, Fractional)

SHIPALOV, M.

SHIPALOV, M., kandidat tekhnicheskikh nauk.

Useful advice. Tekh.mol. 22 no.8:36-37 Ag '54. (MLR 7:8)

1. Predsedatel' prezidiuma sektsii avtomobil'nogo turizma TSentral'-nogo sportivnogo avto-motokluba.
(Automobiles--Apparatus and supplies)

"APPROVED FOR RELEASE: 08/23/2000

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APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549520002-3"

SHIPALOV, M.S.

✓ Bimolecular distillation of vitamin E concentrates and their
potentiative effect on preparations of vitamin A. M.S.

Anal. Set. 1952. Vitamin E concentrates were obtained by min
1450. Vitamin E concentrates were obtained by min

USSR.

CHIKKER, I.Ye.; SHIPALOV, M.S.

Producing concentrated preparations of vitamin A and vitamin E by
molecular distillation. Vitaminy no.2:5-13 '56. (MIRA 10:8)

1. Institut biokhimii im. A.N.Bakh Akademii nauk SSSR. Moskva
(VITAMINS--A) (TOCOPHEROL) (DISTILLATION, MOLECULAR)

SHIPALOV, M. S. (Moscow) UdSSR: XHCCENKOTXMMWXX

"UV-Densitometer."

report submitted IV Intl. Cong. of Biochemistry, Vienna, 1 - 6 Sep 1958.

SHIPALOV, M.S., BOKUCHAVA, M.A., SOBOLEVA, G.A.

Using a debrutineter in quantitative determination of catechins
separated by paper chromatography. [with summary in English].
Biokhimia 23 no.3:390-394 My-Je '58 (MIRA 11:8)

1. Institut biokhimii im. A.N. Bakha AN SSSR, Moskva.
(PYROCATECHOL, determination
chromatography with densimetric quantitative determ. (Rus))

SHIPALOV, M.S., kand.tekhn.nauk; GEKKER, I.Ye., inzh.-tekhnolog

Production of lanolin by the method of molecular distillation.
Tekst.prom. 19 no.10:32-33 0 '59. (MIRA 13:1)
(Lanolin) (Distillation, Molecular)

SHIPALOV, M.S.

ultraviolet densitometer. Biokhimiia 24 no.2:234-241 Mr-Ap '59.
(MIHA 12:7)

1. Institute of Biochemistry, Academy of Sciences of the U.S.S.R.,
Moscow.

(ULTRAVIOLET RAYS,
ultraviolet densitometer (Rus))
(MICROBIOLOGY, appar. & instruments,
same)

8/030/63/000/001/006/013
B104/B102

AUTHOR: Shipalov, M. S., Candidate of Technical Sciences

TITLE: Ultraviolet absorption meter

PERIODICAL: Akademiya nauk SSSR. Vestnik, no. 1, 1963, 59-62

TEXT: Two types of instruments for rapidly determining the concentration of various UV-absorbing substances in solution were developed at the Institut biokhimii im. A.N. Bakh Akademii nauk SSSR (Institute of Biochemistry imeni A.N. Bakh of the Academy of Sciences USSR). Selenium photocells, sensitive to visible light, were used to measure the intensity of the UV-excited luminescence of special screens covered with luminophores. In one instrument the concentration is read from an indicator. The second instrument is designed to record the changes in concentration continuously. The screen was made using JI-29 (L-29) luminophores produced commercially. Adenosine triphosphoric acid, dissolved in uridine, could be determined in concentrations of 0.3-0.5 g/ml. There are 4 figures.

Card 1/1

SHIPALOV, M. S., kand. tekhn. nauk

Ultraviolet absorptiometers. Vest. AN SSSR 33 no. 11:59-62
(MIRA 10:1)
Ja '63.

(Absorptiometer)

8/123/61/000/007/024/026
A004/A104

AUTHOR: Shipanov, L.P.

TITLE: Strain gages

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 7, 1961, 2, abstract
7Zh5 (V sb. "Raschet i konstruir. kuznechno-press. mashin. [ENIKMASH,
v. 2]", Moscow, 1960, 82 - 96)

TEXT: The author presents the results of experimental investigations of
crank press strain gages. The tests were carried out under laboratory conditions
on a special stand with stepless regulation of the number of strokes from 12 to
150 per minute and under plant conditions. 4 types of indicator gages with and
without braking and an experimental induction gage were tested. The following
factors were investigated: the effect of a high pressing speed on the accuracy
of determining the strain by indicator gages, gage life, possibility of utilizing
gages of the indicator type for press deviations during overloads; accuracy of
determining the stresses with the aid of indicator gages with braking. It was
found that indicator gages with braking can be used for protracted checking of
crank press stresses with a maximum error of 8-14% (depending on the type of gage

Card 1/2

Strain gages

8/123/61/000/007/02⁴/026
A00⁴/A10⁴

and indicator being used). Inductive gages excel by simplicity of design, accuracy and stability of indication, they are easily switched off during clutch overloads. A further improvement of this gage is necessary since in the present execution it can be used only on low-speed presses (up to 5-6 strokes per minute). Gages without braking can operate on presses with up to 12-15 strokes per minute owing to the difficulty of visual observation of the indications.

S. Kolesnikov

[Abstracter's note: Complete translation]

Card 2/2

NIKOL'SKIY, I.S., inzh.; KOMISSAROV, V.T., inzh.; SHIPANOV, L.P., inzh.

New forging rolls with a continuous roll forging process.
[Nauch. trudy] EMIKMASha 11:5-13 '65. (MIRA 18:6)

SHIPANOV, T. K.

Cand. Tech. Sci.

Dissertation: "Calculation of the Flow of Peat Mass with Variable Viscosity and Plasticity Along the Pipes." Moscow Peat Inst, 27 May 47.

SC: Vecernaya Moskva, May, 1947 (Project #17836)

SHIPANOV, P. K.

Mos., Moscow Inst., -c1948-c49-. "Flow of a Viscous-Plastic Body in the Annular Space between Two Ciaxial Pipes," Zhur. Tekh. Fiz., 19, No. 10, 1949. "Flow in Pipes of Viscoplastic Dispersed Systems under Conditions of Variable Viscosity and Limits of Shearing Strain," Kolloid. Zhur., 11, No. 5, 1949;

SHILKIN, P.M.; ZEL'VYANSKIY, Ya.A.; SIBAROV, Yu.G.; KUSTOV, V.M.;
TSYKHMAN, A.I.; KUVSHINOV, M.I.; SHIPAREV, Yu.A.; TYURNIN,
G.A.; AVSTREYKH, L.D.; BAKANOV, N.N.; KHITROV, P.A., tekhn.
red.

[Safety engineering regulations for operating the contact
networks of d.c. electrified railroads] Pravila tekhniki bez-
opasnosti pri ekspluatatsii kontaktnoi seti postoiannogo to-
ka elektrifitsirovannykh zheleznykh dorog. Moskva, 1962.
(MIRA 15:7)
128 p.

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye elektrifi-
katsii i energeticheskogo khozyaystva. 2. Zamestitel' na-
chal'nika tekhnicheskogo otdela TsE Ministerstva putey
soobshcheniya (for Shilkin). 3. Technicheskiy otdel TsE Mi-
nisterstva putey soobshcheniya (for Zel'vyanskiy). 4. TSen-
tral'nyy komitet profsoyuza rabochikh zheleznodorozhного
transporta (for Sibarov). 5. Nauchno-tehnicheskiy sovet Mi-
nisterstva putey soobshcheniya (for Kustov). 6. Sluzhba
elektrifikatsii i energeticheskogo khozyaystva Odesskoy zhe-
leznoy dorogi (for Tsykman). 7. ECh Yuzhno-Ural'skoy zheleznoy
dorogi (for Kuvshinov). 8. ECh Moskovskoy zheleznoy dorogi
(for Segala, Shiparev, Tyurnin). 9. EChK Oktyabr'skoy zhelez-
noy dorogi (for Avstreykh). EChK Moskovskoy zheleznoy dorogi
(for Bakanov). (Electric railroads—Safety regulations)

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549520002-3

SHAFRAZEV, V. M.

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549520002-3"

SHIPCHANOV, I. - Gorsko Stopanstvo

Short review of the discussion on soil feeding of plants in the Soviet Union. p. 187
(GORSKO STOPANSTVO Vol. 11, No. 4, Apr. 1955)

SO: Monthly list of East European Accession, (EEAL), LC, Vol. 4, No. 9, Sept. 1955, Uncl.

SHIPCHANOV, I. K.: Master Biol Sci (diss) -- "A comparative study of the drought-resistance of young oaks growing wild in Bulgaria". Moscow, 1959. 16 pp
(Inst of Forestry Acad Sci USSR), 150 copies (KL, No 13, 1959, 103)

Shipchinskiy, A. V.

PA 237T60

USSR/Geophysics - Water Cycle Nov/Dec 52

"Problem of the Internal Water Cycle," A. V. Shipchinskiy

"Iz Ak Nauk SSSR, Ser Geograf" No 6, pp 60-70

Discusses works of M. I. Budyko and O. A. Drozdov, and K. I. Kashin and Kh. P. Pogosyan, who approached the problem of the vol of the water cycle by way of the external water cycle. They concluded that the role of the internal cycle is negligible in comparison with the external.

237T60

SHIPCHINSKIY, A.V.

Programs of meteorology in agricultural institutes. Meteor. i
gidrol. no.9:51-52 S '52. (MLRA 10:9)
(Meteorology, Agricultural--Study and teaching)

SHIPCHINSKIY, Andrey Valerianovich, prof., doktor geogr. nauk; ZELENETSKAYA, L.V., red.; LEVINA, L.G., tekhn. red.

[What an agricultural worker should know about weather and climate]
Chto sleduet znat' o pogode i klimate rabotniku sel'skogo khozaiistva.
Moskva, Izd-vo M-va sel'.khoz. RSFSR, 1960. 87 p. (MIRA 14:7)
(Meteorology, Agricultural)

SHIPCHINSKIY, A.V., prof. (Khar'kov)

"Climate of the Ukraine" by I.E.Buchinskii. Reviewed by A.V.
Shipchinskii. Priroda 50 no.11:90 N '61. (MIRA 14:10)
(Ukraine--Climate) (Buchinskii, I.E.)

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549520002-3

SHIPCHINSKIY, N.V.

DECEASED

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BOTANY

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549520002-3"

9.6000

69082

S/120/60/000/01/020/051
E032/E314AUTHOR: Shipek, L.TITLE: Measurement of the Magnetic-field Exponent Using a
Vibrating CoilPERIODICAL: Pribory i tekhnika eksperimenta, 1960, Nr 1,
pp 74 - 78 (USSR)

ABSTRACT: A description is given of an instrument which may be used to measure the field exponent in a constant magnetic field to a relative accuracy of 1% or better, for $n > 0.3$ in fields of about 0.1 weber/m^2 , the absolute accuracy being about 2%. The field under investigation need not be stabilised. Figure 2 gives a schematic drawing of the instrument. The measuring coil 2 is placed on the bakelite tube 1. The latter also carries two coils, 3 and 4, which are used to excite the vibration of the tube 1. These coils carry an alternating current and oscillate in the field of the permanent magnets 5 and 6. The coil 3 and the magnet 5 cause the translational motion of the measuring coil 2, while the coil 4 and the magnet 6 cause its rotational motion. Figure 5

Card1/3

4

69082
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E032/E314

Measurement of the Magnetic-field Exponent Using a Vibrating Coil

shows a photograph of the device. The device thus communicates a translational oscillatory motion to the coil and at the same time rotational motion of the same frequency. These two motions are adjusted independently until the voltage induced in the measuring coil is zero. The field exponent:

$$n = (dB/dr)(r/B) \quad (4)$$

can thus be calculated from:

$$n = (\alpha/A)r \operatorname{tg} \beta \quad (5)$$

where α is the angular amplitude of the coil,
 A is the translational amplitude and
 β is the angle between the axis of the coil (Figure 1) and the direction of the Z component of the induction B .

Card 2/3

4

69082

S/120/60/000/01/020/051

E052/E314

Measurement of the Magnetic-field Exponent Using a Vibrating Coil

Figure 5 shows a typical chart of the field exponent measured in the field of a 15 MeV betatron.¹⁹ Acknowledgment is made to M. Saydl for permission to publish this work and to Ya. Dvorzhak who assisted in the building of the apparatus.

There are 5 figures and 11 references, of which 4 are English, 1 French and 6 (of Czech origin) are Soviet.

ASSOCIATION: Institut vakuumnoy elektroniki AN Chekhoslovakii
(Institute of Vacuum Electronics, Ac.Sc., Czechoslovakia)

SUBMITTED: January 12, 1959

4

Card 3/3

KISELEV, Yakov L'vovich; SHIPELEVA, N.A., red.; NAUMOV, K.M.,
tekhn. red.

[Basic laws governing state social insurance in the U.S.S.R.]
Osnovy sovetskogo zakonodatel'stva po gosudarstvennomu
sotsial'nomu strakhovaniyu. Moskva, Izd-vo VPSh i AON pri
TsK KPSS, 1962. 109 p. (MIRA 15:3)
(Insurance, Social)

FLEKSER, N.Ya.; SHIPENKO, O.P.

Apparatus for controlling the underground flow by means of radioactive indicators. Razved. i okh. nedr 27 no.6:42-45 Je '61. (MIRA 14:9)

1. Moskovskiy filial instituta Orgenergostroy.
(Water, Underground) (Radioactive tracers)

S/169/62/000/012/034/095
D228/D307

AUTHORS: Fleksler, N.Ya. and Shipenko, O.N.

TITLE: Equipment for controlling ground flows by the radioactive tracer technique

PERIODICAL: Referativnyy zhurnal, Geofizika, no.12, 1962, 49,
abstract 12A394 (Razvedka i okhrana nedr, no. 6,
1961, 42-45)

TEXT: The authors describe a set of equipment, which includes a contrivance for introducing a tracer into the filtration flow (mechanical or explosive), a sampling device, and a recording apparatus - a radioactivity filtration meter. The outfit is intended for work in wells with a diameter of more than 50 mm and in open streams. The radioactivity filtration meter is designed to work in wells. It allows the time to be fixed and the recorder to be switched on automatically when the tracer appears at the observation point. The outfit contains a metering unit, a recording unit, and submersible probes. Each submersible probe has a diameter of

Card 1/2

Equipment for controlling ground ...

S/169/62/000/012/034/095
D228/D307

36 mm and is provided with an CTC -6 (STS-6) counter; the probe's circuit is assembled on transistors. The commutation system ensures that the readings of each probe are recorded at a 5-minute interval. This type of equipment was used for controlling filtration in the alluvial dam of the Gor'kovskaya GES (Gor'kiy Hydroelectric Station) and was found to work reliably.

Abstracter's note: Complete translation ↴

Card 2/2

SHIPENKO, P. I.

USSR/Hydrology - Irrigation

Aug 51

"Forecasting the Level of Ground Waters in Regions
Adjacent to the Volga," Prof P. I. Shipenko

"Gidrotekh i Meliorat" No 8, pp 40-44

River channels raise ground-water level and af-
fect vegetation of adjacent territories. Shipenko
studies this problem and compiles tables showing
variation of ground-water levels in dependence on
the hydrological state of rivers or on the digging
of channels.

189750

SHIPENKO, P.I., prof.

Pressureless water outlets. Gidr. i mel. 14 no.2:14-22 F '62.
(MIRA 15:1)

1. Moskovskaya ordena Lenina sel'skokhozyaystvennaya akademiya
im. K.A.Timiryazeva.

(Hydraulic structures)

SHIPENSHTEYN, A

USSR/ Electronics - Television

Card 1/1 Pub. 89 - 18/28

Authors : Shipenshteyn., A.

Title : "Rembrandt" television set

Periodical : Radio 4, 33-36, Apr 1955

Abstract : The design, assembly and operation of the "Rembrandt" television set is described, and the frequency characteristics of the various stages of video signal amplifiers, and the audio-frequencies of the receiver are explained. Illustrations; circuit diagram; drawing; tables.

Institution :

Submitted :

СОДЕРЖАНИЕ

С. А. Грибовский С. Н. Балашов В. Н. Балашова А. Г. Фомин Ю. Н. Ефимов	11 часов (с 10 до 16 часов)
Комплект ферритомагнитных элементов и трансформаторов	
10 часов (с 10 до 22 часов)	
A. A. Кондратов Методы расчета устройств по ферритовым магнитам Ю. Н. Шашков	11 часов (с 10 до 16 часов)
Оценка расчета индуктивности катушек, генераторов ферритомагнитных переходов с промежуточными катушками	
В. В. Королев В. С. Гаринов	
Взаимодействие индуктивных элементов дросселей и катушек	
A. A. Гончар О расчете катушек по ферритомагнитным переходам	
64	

report submitted for the Centennial Meeting of the Scientific Technological Society of
Radio Engineering and Electronic Communications Inc. A. S. Popov (TEKHNIS), Moscow,
8-10 June, 1959

MRL'NIKOV, I.N., inzh.; SHIPERKO, A.A., inzh.

New methods of twisting threads and removing accumulated yarn
on ring spinning frames used in woolen manufacture. Tekst. prom.
18 no.8:59-61 Ag '58. (MIRA 11;10)
(Spinning machinery) (Woolen and worsted manufacture)

GRINSHPAN, Ya.M.; SHIPEROV, M.A.

Continuous metal cutting on a planing machine. Bum.prom.31 no.10:24
0'56. (MIRA 10:1)

1. Kondoposhskiy tsellyulozno-bumashnyy kombinat.
(Planing machines)

ATLON, L. H., SHIBATA, R. M.

Esophagus - Surgery

Surgical treatment of cancer of the cervical esophagus. Vest. khir. 72 No. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, June 1952. Unclassified.

SHIPEROVA, R.Ya.

True intestinal calculi. Khirurgiia no.10:87-89 0 '53. (MLRA 6:11)

1. Iz Sverdlovskogo oblastnogo onkologicheskogo dispansera (nauchnyy rukovoditel' - professor L.M. Batner, glavnyy vrach - doktor meditsinskikh nauk A.N. Lebedeva). (Intestines--Obstructions) (Calculi)

SHIPEROVA, R.Ya., kand.med.nauk (Orel, ul. Lenina, d.24/26, kv.3)

Subtotal resection of the pancreas in cancer. Vest.khir. 79
no.7:124-125 J1 '57. (MIRA 10:10)

1. Iz onkologicheskogo otdeleniya (zav. - R.Ya.Shiperova)
Orlovskoy oblastnoy bol'nitsy.
(PANCREAS, neoplasma,
subtotal pancreatectomy (Rus))

SHIPEROVA, R.Ya.

Causes of mortality following electrosurgical operations with a
single-row suture in cancer of the stomach. *Khirurgia* 36
no. 2:122-124. P '60. (MIRA 13:12)
(STOMACH—CANCER)

SHIPEROVA, R.Ya., kand.med.nauk; NAFTULIN, N.M.

Centennial of the Orel Medical Society. Zdrav. Ros. Feder. 6 no.3:
32-36 Mr '62. (MIRA 15:4)

1. Iz Orlovskogo oblastnogo otdela zdravookhraneniya (zav. K.A.Trofimov).
(OREL—MEDICAL SOCIETIES)

PROTOPOPOV, S.P., zasl. deyatel' nauki RSFSR, doktor med. nauk, prof.,
otv. red.; BAZHENOV, P.S., zasl. vrach RSFSR, red.; IVANOV,
S.S., zasl. vrach RSFSR, kand. med. nauk, red.; KOKIN, M.K.,
zasl. vrach RSFSR, kand. med. nauk, red.; TROFIMOV, K.A., red.;
TSUKANOVA, Ye.P., zasl. vrach RSFSR, red.; SHIPEROVA, R.Ya.,
zasl. vrach RSFSR, kand. med. nauk, zam. otv. red.; ANTONOV, V.,
red.; KUZIN, N., tekhn. red.

[Problems of practical medicine; from the practice of medical
institutions in Orel Province] Voprosy prakticheskoi meditsiny;
iz opyta meditsinskikh uchrezhdenii Orlovskoi oblasti. Orel,
Orlovskoe knizhnoe izd-vo, 1962. 335 p. (MIRA 16:6)

1. Zaveduyushchiy Orlovskim oblastnym otdelom zdravookhraneniya
(for Trofimov).

(OREL PROVINCE--MEDICINE--PRACTICE)